



## SEQUENCE LISTING

<110> Lowell, George H.  
White, Gregory L.  
Burt, David S.  
Leanderson, Tomas B.  
Good, Michael F.  
Batzloff, Michael R.

<120> VACCINE

<130> 484112.413

<140> US 10/706,275  
<141> 2003-11-13

<150> US 60/425,409  
<151> 2002-11-15

<150> AU 2002302132  
<151> 2002-11-15

<160> 19

<170> FastSEQ for Windows Version 4.0

<210> 1  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>

<223> antigenic peptide sequence derivative of S. pyogenes

<400> 1  
Ala Ser Arg Glu Ala Lys Lys Gln Val Glu Lys Ala Leu Glu  
1 5 10

<210> 2  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>

<223> antigenic peptide derivative of S. pyogenes with  
flanking sequences

<400> 2  
Lys Gln Ala Glu Asp Lys Val Lys Ala Ser Arg Glu Ala Lys Lys Gln  
1 5 10 15

Val Glu Lys Ala Leu Glu Gln Leu Glu Asp Lys Val Lys  
20 25

<210> 3  
<211> 19  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> antigenic peptide sequence EIN19

<400> 3  
Glu Ile Asn Thr Glu Glu Glu Gly Thr Pro Asp Gln Ile Ser Ser Leu  
1 5 10 15  
Ile Glu Lys

<210> 4  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> antigenic peptide sequence KQL30

<400> 4  
Lys Gln Leu Glu Asp Arg Val Gln Gln Leu Glu Thr Glu Lys Gln Ile  
1 5 10 15  
Ser Glu Ala Ser Arg Lys Ser Ala Glu Asp Lys Val Lys Gln  
20 25 30

<210> 5  
<211> 20  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> antigenic peptide sequence p145

<400> 5  
Leu Arg Arg Asp Leu Asp Ala Ser Arg Glu Ala Lys Lys Gln Val Glu  
1 5 10 15  
Lys Ala Leu Glu  
20

<210> 6  
<211> 28  
<212> PRT

<213> Artificial Sequence

<220>

<223> antigenic peptide sequence derivative of p145 base

<400> 6

Gln Leu Glu Asp Lys Val Lys Gln Leu Arg Arg Asp Leu Asp Ala Ser  
1 5 10 15  
Arg Glu Ala Lys Glu Glu Leu Gln Asp Lys Val Lys  
20 25

<210> 7

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> antigenic peptide sequence derivative of p145 base

<400> 7

Leu Glu Asp Lys Val Lys Gln Ala Arg Arg Asp Leu Asp Ala Ser Arg  
1 5 10 15  
Glu Ala Lys Lys Glu Leu Gln Asp Lys Val Lys Gln  
20 25

<210> 8

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> antigenic peptide sequence derivative of p145 base

<400> 8

Glu Asp Lys Val Lys Gln Ala Glu Arg Asp Leu Asp Ala Ser Arg Glu  
1 5 10 15  
Ala Lys Lys Gln Leu Gln Asp Lys Val Lys Gln Leu  
20 25

<210> 9

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> antigenic peptide sequence derivative of p145 base

<400> 9  
Asp Lys Val Lys Gln Ala Glu Asp Asp Leu Asp Ala Ser Arg Glu Ala  
1 5 10 15  
Lys Lys Gln Val Gln Asp Lys Val Lys Gln Leu Glu  
20 25

<210> 10  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> antigenic peptide sequence derivative of p145 base

<400> 10  
Lys Val Lys Gln Ala Glu Asp Lys Leu Asp Ala Ser Arg Glu Ala Lys  
1 5 10 15  
Lys Gln Val Glu Asp Lys Val Lys Gln Leu Glu Asp  
20 25

<210> 11  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> antigenic peptide sequence derivative of p145 base

<400> 11  
Val Lys Gln Ala Glu Asp Lys Val Asp Ala Ser Arg Glu Ala Lys Lys  
1 5 10 15  
Gln Val Glu Lys Lys Val Lys Gln Leu Glu Asp Lys  
20 25

<210> 12  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> antigenic peptide sequence derivative of p145 base

<400> 12  
Lys Gln Ala Glu Asp Lys Val Lys Ala Ser Arg Glu Ala Lys Lys Gln  
1 5 10 15  
Val Glu Lys Ala Val Lys Gln Leu Glu Asp Lys Val  
20 25

<210> 13

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> antigenic peptide sequence derivative of p145 base

<400> 13

Gln Ala Glu Asp Lys Val Lys Gln Ser Arg Glu Ala Lys Lys Gln Val  
1 5 10 15  
Glu Lys Ala Leu Lys Gln Leu Glu Asp Lys Val Gln  
20 25

<210> 14

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> antigenic peptide sequence derivative of p145 base

<400> 14

Ala Glu Asp Lys Val Lys Gln Leu Arg Glu Ala Lys Lys Gln Val Glu  
1 5 10 15  
Lys Ala Leu Glu Gln Leu Glu Asp Lys Val Gln Leu  
20 25

<210> 15

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> antigenic peptide sequence derivative of p145 base

<400> 15

Lys Gln Ala Glu Asp Lys Val Lys Ala Ser Arg Glu Ala Lys Lys Gln  
1 5 10 15  
Val Glu Lys Ala Leu Glu Gln Leu Glu Asp Lys Val Lys  
20 25

<210> 16

<211> 15

<212> PRT

<213> Artificial Sequence

<220>  
<223> antigenic peptide sequence derivative of S.  
pyogenes

<400> 16  
Ala Ser Arg Glu Ala Lys Lys Gln Val Glu Gln Lys Ala Leu Glu  
1 5 10 15

<210> 17  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthesized immunopotentiating spacer linked to  
the J14 peptide

<400> 17  
Cys Tyr Gly Gly  
1

<210> 18  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthesized immunopotentiating spacer linked to  
the J14 peptide

<400> 18  
Gly Gly Tyr Cys  
1

<210> 19  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthesized anchor and immunopotentiating space  
sequence

<400> 19  
Lys Gly Gly Tyr Cys  
1 5